

### Supplementary Figure 1.

A. CD70 expression on melanoma tumor lines 624 and 938, and their corresponding CD70-stable transfectants. 624mel and 938mel were retrovirally transduced with retrovirus CD70.

B. CD70 expression on renal tumor lines.

All cell lines were stained with anti-CD70 PE antibody and analyzed on FACSCanto II.

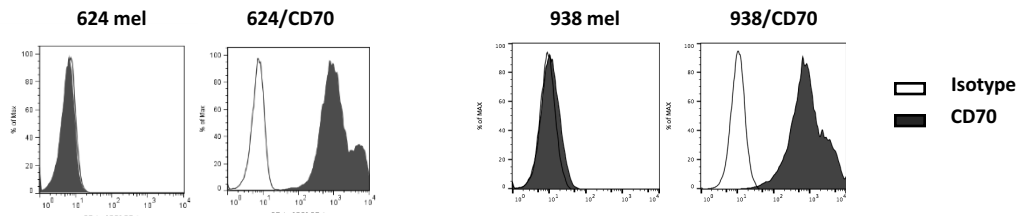
### Supplementary Figure 2.

A. In vivo persistence of transferred murine T cells. T cells from Ly5.1+ mice were stimulated with anti-CD3 and CD28 for 2 days, and transduced with mCD27-zeta or control vector. 4 days after transduction, transduced T cells ( $1 \times 10^7$ ) were injected i.v. to C57BL/6J mice. Spleens were taken from the mice at day 0, 3, 4, 5, 6, 7 and 12, and stained with anti-CD45.1-FITC and anti-CD3-PE, and analyzed on FACSCantII, and gated on PI- population. The number of Ly5.1+ cells were determined by multiplying the percentage of Ly5.1+ cells by FACS analysis with the total of the number of splenocytes at each day.

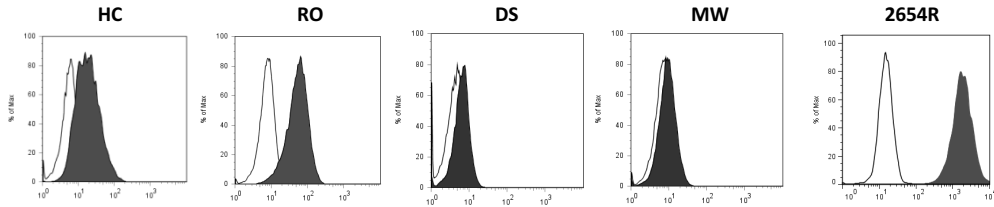
B. Body weight of non-tumor bearing mice treated with mCD27-zeta-transduced T cells compared to control T cells. Mice were given 500 cGy or left untreated, and then  $1 \times 10^7$  murine T cells transduces with mCD27-zeta or control T cells were injected intravenously. Mice were weighed at each day starting from day 5 after the cell transfer.

C. Total WBC, lymphocyte and splenocyte counts from non-tumor bearing mice received treatment describe in B.

**A**

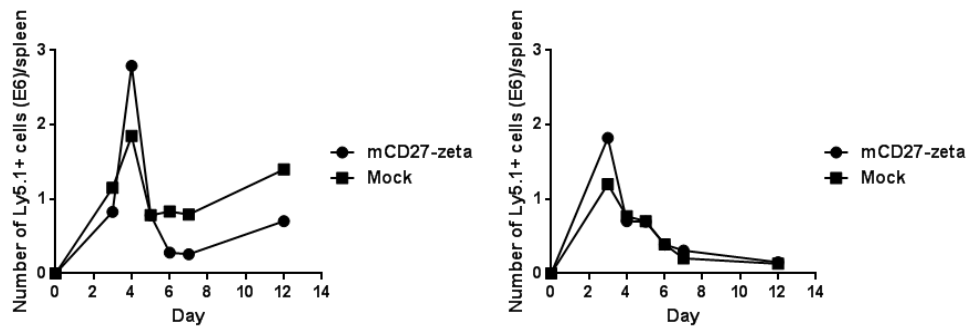


**B**

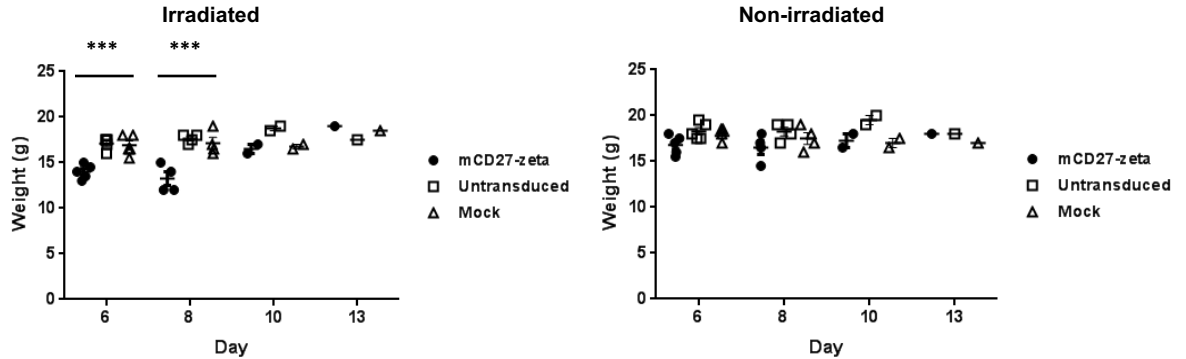


**Supplementary Figure 1**

**A**



**B**



**C**

